

Chapter 2. OPEN SPACE AND RECREATION SUPPLY

Massachusetts is fortunate to have a rich variety and abundance of natural splendor and related recreation amenities. From Race Point on Provincetown to the tip of Mount Greylock in the Berkshires, residents and visitors alike can find opportunities for most any pursuit they can think of - from skiing and skating in the winter, to sailing and swimming in the summer, to hiking and hunting in the fall. Recreation opportunities abound in rural, suburban and urban settings. In many cases, open spaces such as greenways, bikeways, long distance trails, and river corridors help connect these settings, creating a continuum of landscapes and built environments that introduce residents and visitors to different aspects of the Commonwealth's land, people and industry. This section summarizes the recreation opportunities available in Massachusetts, based upon the findings of the 1988 SCORP recreation supply inventory.

Massachusetts has been a leader in the open space arena, both in the public and private sectors. With over 140 land trusts, the state has the largest number of private land trusts in the nation. Together with the public agencies, the 1988 and *SCORP 2000* inventories reveal that current recreation and protected conservation resources in Massachusetts account for over 20% of the land area of the state. Continuing in this leadership role, since 1988, the Commonwealth and its partners in land protection have added over 100,000 acres of protected lands to its inventory of recreation and conservation lands!

Ownership and Management of Open Space Lands

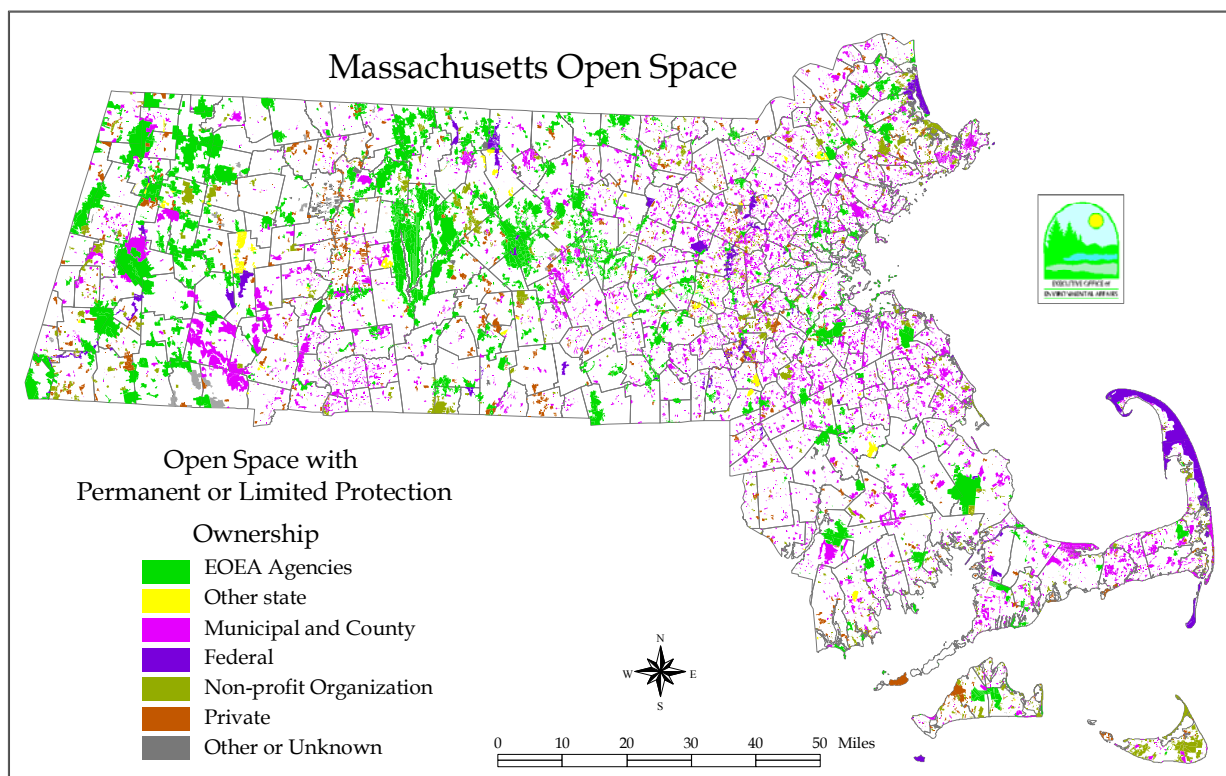
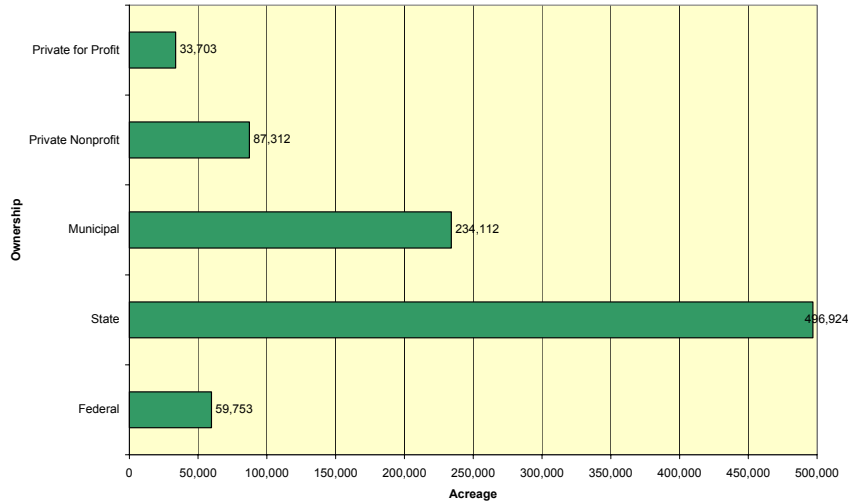


Figure 2. Massachusetts Open Space Shown by Type of Owner

State Agencies

State Agencies are the principal landowners, responsible for over 530,000 acres. These sites tend to be quite large as indicated by the relatively small number of sites owned by state agencies. Municipalities are the second largest landowners but own the greatest number of sites (over 7,000). Private nonprofit and for profit owners are also important recreation landowners.

Figure 3. Major Open Space Land Owners by Acres



The larger state forests include October Mountain at 16,127 acres, Myles Standish at 14,700 acres, and Mt. Greylock State Reservation at 12,500 acres. The state's environmental agencies within the Executive Office of Environmental Affairs (EOEA) control most of the Commonwealth's open space resources. EOEA agencies include the Department of Environmental Management (DEM), which manages state parks, beaches, and forests; the Metropolitan District Commission (MDC), which manages both metropolitan Boston area parks and regional water supplies in the central part of the state that serve the metropolitan area; and the Department of Fisheries, Wildlife and Environmental Law Enforcement (DFWELE), which oversees marine resources as well as terrestrial wildlife management areas. A full range of recreation activity, both passive and active, are provided by these three agencies, for a nominal fee at DEM sites, and free of charge at MDC reservations. DFWELE sites are generally open to the public free of charge, although income is generated through hunting and fishing licenses to support further land acquisition.

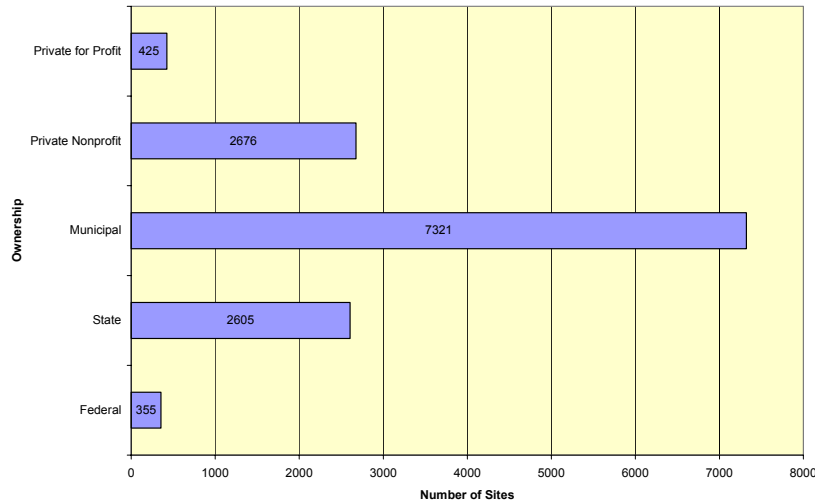
In addition, the EOEA includes two land protection programs that are dedicated to assisting less-than-fee or non-state ownership of resources. These are administered through the Department of Food and Agriculture (DFA), which protects soil resources, and the scenic and economic (food production) resources associate with farming; and the Division of Conservation Services (DCS), which administers EOEA's approval of non-state funded Conservation Restrictions (easements), and grants conservation and recreation funds (both state and federal) to the cities and towns through their parks and conservation commissions. Both DFA and DCS programs operate on a competitive application basis.

Municipalities

Municipalities are the second largest landowners in the state, but own the greatest number of sites, over 7000. Total acreage under municipal ownership reflects both the infusion of state and federal funds and the growth in importance of the conservation commissions created by the state legislation in 1957. The commissions' main goal is resource conservation, and they are usually responsible for managing municipal conservation land. In addition, these commissions are the administrators of the state and local wetlands and river protection permitting processes, an increasingly heavy burden that has become the focal point of most commissions' energies. In many cases, this responsibility has been addressed to the exclusion or

detriment of active local land protection and management efforts. In response, many towns have developed open space committees and local land trusts to fill conservation needs. The 1998 passage of the Cape Cod Land Bank in fact institutionalizes this development for 15 towns plus the town of Marion, by requiring such committees while leaving their make-up to the towns to decide. The possibility of joint membership of some members from the conservation commissions, planning boards and recreation commissions is thus left open.

Figure 4. Major Open Space Land Owners by Number of Sites



Parks and recreation departments are major municipal land managers and are responsible for a large number of sites. School departments should also be considered, for contained within nearly every school property is some kind of outdoor recreation facility, often with unrestricted access if not legally protected open space. The acreage controlled by water departments are also significant, but often have restricted recreation access due to both real and perceived conflicts between protection of water quality and recreation use.

Private Nonprofit and For-profit Owners

Private nonprofit and for-profit owners are also important recreation landowners, although the scope of recreation activity or population served by these sites is much more limited or special purpose than the publicly owned “portfolio”. Among private nonprofit land managers, land trusts protect the greatest number of acres. The state’s two largest land trusts, Massachusetts Audubon Society and the Trustees of Reservations, alone account for over 54,000 acres.

The type of recreation activities allowed on private nonprofit sites varies with the mission of the organization. In the case of land trusts, the primary goal is most often resource conservation, and therefore, certain types of active recreation are restricted. Opportunities for more passive pursuits, however, such as nature study, walking, and historic appreciation are abundant. Other private nonprofits have a more active recreation focus. For example, fish and game clubs provide numerous opportunities for hunting and fishing, while Boy Scout and Girl Scout camps provide a full range of both active and passive recreation opportunities. Indeed, these latter two groups of land owners, controlling nearly 12,000 acres of land without permanent open space protection represent one of the most important land protection opportunities in Massachusetts. As demonstrated in several recent MDC Watershed, DEM and DFWELE acquisitions, the sale or gift of conservation restrictions to the state or other qualified recipient, while leaving the fee ownership, use and management of the land with the private owners, can be of great benefit to both the public and these recreation oriented non-profit groups.

Private for-profit recreation resources include golf courses, campgrounds, and ski areas. Golf courses have had a particularly notable growth in popularity over the past decade, perhaps exceeding a similar trend in

tennis during the 1980's. Private campgrounds, although they occupy little land area and are not abundant statewide, add to the somewhat constrained supply of public campgrounds, especially in certain parts of the state. Another private recreation resource not reflected in the chart data are the private marinas, which, although they also occupy little space, are abundant and significant resources in the coastal region and on major lakes and rivers. All downhill ski areas in Massachusetts are privately operated (although several lease public land), and although they generally offer less vertical drop and fewer runs than the major northern New England resorts, they offer the great advantage of being eminently easier to reach. The expansion of night skiing and snow making capability has strengthened the niche market of these local areas.

Taken together, the for-profit recreation facilities add a much valued dimension to recreation opportunity in Massachusetts. While available on a fee basis and generally representing significant costs not available to all households, they provide a type and level of service difficult if not impossible for the public landowners to offer. They also help to address demand, thereby reducing demand on public and non-profit facilities.

The Federal Government

The federal government owns and manages a smaller but strategic number of sites, most notably the Cape Cod National Seashore, the Parker River, Great Meadows and Oxbow National Wildlife Sanctuaries and the Cape Cod Canal, all important elements of the recreation and conservation complex of sites in Massachusetts. In addition, there are a number of small sites that also have very high visitation numbers, including the Minuteman National Park and U.S.S. Constitution.

New joint ventures with federal, state and local interests are also unfolding. In Southeastern Massachusetts, the Waquoit Bay Research Reserve and Mashpee National Wildlife Refuge in the coastal plain ponds north of Myles Standish State Forest in Plymouth are outstanding examples. In the Connecticut Valley, conservation restrictions on 2,000 acres along the Deerfield River were achieved through the Federal Energy Regulatory Commission's licensing of hydropower facilities.

Among the federal agencies, the National Park Service (NPS) is the largest federal landholder, mainly due to their holdings in the Cape Cod National Seashore. The Department of Defense (DOD) is the second largest landholder, and although these lands have traditionally been inaccessible for recreation, they play an important role in protecting wildlife and plant habitats due to large, relatively undisturbed buffer areas that accompany defense installations. DOD sites are also important in light of recent decisions to close military installations, creating the need for military land re-use plans which could potentially include recreation use. Three active examples in Massachusetts include the former Natick Laboratories property in Sudbury and Hudson, now largely a DEM State Forest, the Oxbow National Wildlife Refuge, formerly part of Fort Devens, and, still pending, the possibility of conversion of wetland portions of the Weymouth Naval Air Station to conservation use. The extraordinary Mass. Military Reservation conversion now in progress is actually a property in state ownership, under lease to the National Guard, Coast Guard and Air Force. The plan to convert 15,000 acres of its northern section to wildlife refuge and water supply protection is moving forward with the support of the Governor and Secretary of Environmental Affairs. The Army Corps of Engineers (ACOE) and U.S. Fish and Wildlife Service (FWS) account for the majority of the remaining federal agency holdings.

In terms of recreation use of these lands, the NPS provides the greatest number of recreation opportunities for swimming, hiking, picnicking, and boating along the National Seashore, along with providing opportunity for historic appreciation (sightseeing, photography) and touring at their many historic sites. FWS limits recreation to protect important habitats and wildlife but still provides opportunities for walking, hiking, boating, and nature study. ACOE's main mission is water management, but they do allow various forms of water-based recreation and biking in some areas.

Updating the SCORP Inventory

The 1988 *SCORP* contained a comprehensive inventory of open space and recreation facilities for the entire state. Data was collected on federal, state and local lands, providing information such as owner, location, access, and facilities for each property.

This 1988 data provides the most complete database of its kind to date. All of the data on facilities supply referred to in the 2000-2005 SCORP is taken from the 1988 inventory.

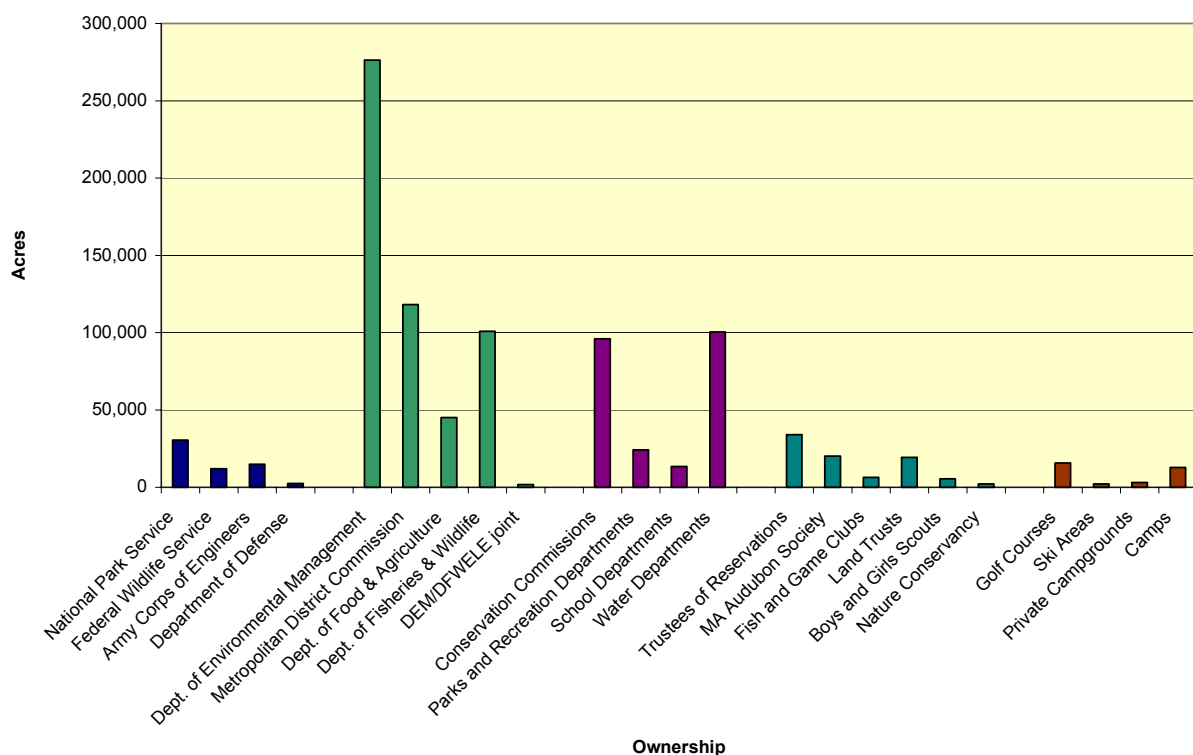
Since 1993 a project to update the 1988 inventory, create a new database to store the information, and most importantly, link the new database to a geographic information system (GIS) has been underway. While the inventory is considered largely complete, staff at MassGIS, regional planning agencies, municipalities and other organizations will continue to update and maintain the inventory. The land resources supply data from the ongoing inventory presented here are limited in this discussion to the number of acres and sites under different ownership. However, a host of additional data, including information on public access, primary use, address, secondary interests (e.g. conservation restrictions) are available through MassGIS.

This project, the Open Space Mapping Project (OSMP), allows spatial display and analysis of both open space and outdoor recreation data through GIS, as well as improved viewing capabilities. The *SCORP 2000* contributed to the development of this new open space update, database, and GIS link, and future planners should find the system a valuable tool in developing subsequent SCORP documents. Data from the Open Space Mapping Project is contained in this report. For more information on OSMP call MassGIS at (617) 626-1076.

Distribution of Recreation and Protected Land

A review of the status of protected open space shows that approximately one-fifth of the Commonwealth's land area is protected. Note, however, that only a portion of the recreation areas listed in the chart below are permanently protected open space. Protected areas are generally all state and most federal lands (not ACE facilities, nor DOD installations), but only some municipal and private lands. Facilities or land owned by municipal school departments, boards of selectmen, fish and game clubs, Boys and Girls Scouts, golf courses, ski areas and private campgrounds and camps generally have either temporary or no "protected" status. Without legal protection, these areas are vulnerable to a change of use, and the resources could easily be lost.

Figure 5. Acreage Held by Major Open Space Land Owners



Studying the statewide and regional distribution of the lands shown in the table below reveals conclusions that are at once both obvious and surprising. Not surprisingly the largest region, the Connecticut Region, also has the largest open space and recreation acreage. Similarly, the smallest region, the Metropolitan Boston Region, has the smallest open space acreage. A comparison by percentage, however, of the amount of open space to the size per total land area in the region reveals that the Connecticut Region ranks only fourth highest among the planning regions, while the much more urbanized Metropolitan Boston Region ranks third. This statistic becomes even more striking when you consider that the Metropolitan Boston Region contains approximately 32% of the state population but only 4.8% of the land area.

Figure 6. Open Space and Recreation Acreage by Planning Region

Planning Region	Population 1990 Census	Regional Land Area	Open Space/ Recreation Acres	% Regional Land Area in OS/Recreation	Contribution to State Open Space Total	% Total MA Land Area
Berkshire	139,352 (2.3)	597,043	176,253	29.5%	12.0	3.5
Connecticut Valley	672,970 (11.1)	1,185,741	268,829	22.7%	24.3	5.4
Central	709,705 (11.8)	962,131	177,979	18.5%	16.1	3.5
Northeastern	1,276,530 (21.2)	762,829	142,044	18.6%	12.9	2.8
Metropolitan Boston	1,919,362 (31.9)	239,795	62,244	26.0%	5.6	1.2
Southeastern	1,094,250 (18.2)	915,981	128,000	14.0%	11.6	2.6
Cape Cod & Islands	204,256 (3.4)	353,235	148,676	42.1%	13.5	3.0
Statewide	6,016,425	5,016,755	1,104,025			22.0

A large percentage of protected lands occurs, as expected, in the Berkshire Region (29.5% of regional land area in open space use), yet a much higher percentage of recreation and protected lands occur on the Cape

and Islands (42.1%), and the Berkshires are followed closely by the Metropolitan Boston Region, which has achieved 26.0%. The Northeastern Region ranks fifth in open space acreage and percent of regional land area in open space, while having the second highest population. As recently recognized, the Southeastern Region trails the state in percentage of land area protected or in recreation use at 14.0%, yet has the third largest population, just behind that of the Northeast at 1.1 million and growing rapidly.

Recognizing this trend compelled the EOEa to embark on the Scenic and Natural Diversity (SAND) Program to dedicate a minimum of \$30 million in open space funds to this region in the period of Fiscal Years 1998 through FY 2001. This funding also recognized this region and the Cape as the most rapid growth areas of the Commonwealth over the last and next 10 years. Some 7,135 acres were added to the open space inventory through this program. Among the many exciting additions in the Southeastern Region are:

- Conservation and hunting areas in Mattapoisett and Rochester at the Haskell Swamp;
- The protection of the 800 acre Camp Catchlot adjacent to the Myles Standish State Forest; and
- The new 206 acre Nasketucket Bay State Park in Mattapoisett providing over 3000 linear feet of new coastal access.

Statewide, other major additions to the inventory since the 1988 SCORP include:

- 600 acres at French King Gorge on the Connecticut River;
- The 1,157 acre Jug End property in the southern Berkshires;
- The 1490 acre Wildlife Management Area at Montague Plains;
- The 200 Wilson Mountain Reservation in the MDC district along Rt. 128;
- The 357 acre Hyannis Ponds Wildlife Management Area; and
- The South Cape Beach facilities on Cape Cod.

In addition, the Martha's Vineyard and Nantucket Land Banks, providing dedicated local funding for open space acquisition, have been in operation throughout the period since 1988, having great effect in the islands' efforts to meet the demands placed upon them for scenic, water-based, and historical recreation visitation. To these innovative funds the Commonwealth has now added legislation and matching funds to create a Cape Cod Land Bank, commencing operation July 1, 1999. This fund begins with a dedication of \$15 million in state matching funds, and is expected to raise an additional \$8 million per year in municipal funds over the next twenty years of its planned existence.

Per Capita Distribution of Recreational Areas

Clearly, the geographic distribution of recreational areas, or sites, must also be viewed in light of population distribution, and it is obvious with the concentration of population in the eastern part of the state, near the coast, that people are far less evenly distributed than are acres. The per capita acres of recreation and conservation land available within the Metropolitan Boston Region are predictably low, at .03 acres per person (or 300 acres per thousand, as some of the national recreation standards would be expressed). This region is followed by the Northeastern and Southeastern Regions, at .11 and .12 acres per capita respectively. A little more surprising, notwithstanding the presence of the state's second largest city, Worcester, is that the large Central Region only reports .25 acres of open space per capita. Conversely, the Berkshires and Cape Cod and Islands Regions seem flush with recreational opportunity, at 1.26 and .73 acres per capita respectively, until one stops to think of the level of both in-state and out-of-state visitation these particular regions receive. Figures for the out-of-state visitors, as will be noted again, are not represented in the demand survey figures provided in the next chapters.

The discussion of these supply-side statistics and patterns in the policy and recommendation sections in subsequent chapters must grapple with the age-old dilemma of making sites accessible to people where they live, while also recognizing the value placed on wilderness experience and travel to exotic locations whose very power of attraction comes from their distance from home. Massachusetts' environmental agencies have come to know that both are critically important.

Types and Uses of Recreational Areas

Recreation takes many forms. It can be active or passive, physically challenging or psychologically soothing, an individual endeavor or a family activity. Recreation can be pursued in one's own backyard or in a state park miles from home. Most importantly, recreation is a diversion from the routine of every day life. It is what we do for relaxation, how we spend time with family and friends, and how we keep in touch with the natural world around us. It is as Webster's defines it: "a refreshment in body or mind".

The raw number of acres in either protected or recreation use (and not always protected open space) reported in the prior section is further refined here, and expressed more specifically in terms of the number of recreation sites, and types of recreational activities represented. To render the large amount of information produced in this SCORP a little easier to grasp, the 38 specific recreational activities documented here have been grouped into five general categories:

- field-based;
- passive;
- trail-based;
- water-based; and
- wilderness.

This categorization represents a slight elaboration on the 1988 SCORP categories, where "Natural Resource Facilities" have now been broken into "Wilderness" (e.g. camping, hiking) and "Passive" (e.g. sunbathing, nature painting and photography) activities. The former "Recreation Facilities" are now "Field-Based Activities" which includes baseball, basketball, football, soccer, golf, tennis, playgrounds, volleyball and ice skating at rinks. Collectively, all of these activities require formal and often extensive site development. The former "Transportation Activities" are now described as "Trail-Based Activities".

The five general categories of recreational activities that are available across the state are listed below. The table shows availability of these activities, whether formally or informally available. That is, activities that occur at sites that are not designated for that activity are counted. The purpose of the data is to show the activities that are actually occurring, not only those that have been designed for, and consequently this method gives an expanded estimate of activities. The total number of sites for all activities across the state is listed at the top of the table. Activities have been grouped into five categories based on the similarity of the recreational areas, or resources, on which they take place.

Figure 7. Number of Sites by Activity

Activity	Statewide	Berkshire	Connecticut Valley	Central	Northeastern	Metropolitan Boston	Southeastern	Cape Code and Islands
# of Sites	10,963	488	1,283	2,526	2,526	1,956	2,107	1,326
Field-Based	9,920	516	1,554	1,379	2,041	2,217	1,580	631
Passive	8,708	525	1,009	1,024	2,066	1,241	1,552	1,291
Trail-Based	12,859	1,041	2,038	1,935	3,466	1,208	2,041	1,130
Water-Based	7,853	476	933	1,008	1,545	781	1,514	1,572
Wilderness	1,619	162	286	276	296	30	319	150

Statewide, the largest number of existing recreational areas appears to be dedicated to trail-based and field-based activities, with the number of sites for passive recreation and then water-based activities following relatively closely. By a long margin, however, the fewest number of sites are available for wilderness activities.

This table also illustrates that opportunities for certain field activities are significantly more abundant in one region than another. Basketball, tennis, and playground opportunities are more abundant in the urban the Metropolitan Boston Region than in the suburban and rural regions. As with field activities overall, this finding can be attributed to the relatively small area required for these facilities and the limited land area

available for recreation in the metropolitan Boston area. Sightseeing and touring opportunities are most abundant in the Metropolitan Boston and Cape Regions, most likely a result of the high concentrations of recognized historic sites.

A look at regional patterns reveals some unexpected patterns. The Berkshire towns report the fewest number of total sites – perhaps because of larger size of sites and lesser population. However, even the number of wilderness and trail sites, which would be expected to be larger, is much lower than other regions.

Conversely, the Northeastern Region, encompassing Middlesex and Essex Counties, ties the Central Region for the largest number of sites overall and reports significantly more individual sites of all kinds than all other regions. While surprising, this conclusion is born out to some degree by the survey of where state residents have reported recreation experience (see Chapter 3: Demand). That 1995 survey ranks the Northeastern Region first or second in 7 out of 12 categories of reported usage of facilities in the region. Yet, the Northeastern Region contains only a modest number of the state's total recreation acreage, ranking fifth out of the 7 regions in open space acreage. This implies both a higher density of activity per site, and higher utilization and visitation rates than other regions. Most notable is the much larger number for passive and trail-based activities in the Northeast than other regions.

Other patterns of different regional activity worth noting here are the apparently strong supply of trail-based, water-based and wilderness activity in the Southeastern Region, a region which ranks in the mid to low ranges in total number of sites and acreage respectively. Also, the rough three-way tie for supply of water-based facilities among the Cape, the Northeastern and the Southeastern is notable. Notwithstanding, the Cape and Islands, renown nationally and world-wide as a beach and resort destination, it is clear that state residents have equal numbers of water-based facilities on the North Shore (Northeastern Region) and South Shore and South Coastal areas (Southeastern Region). The varying usage of these resources reported by state residents, however, reveals interesting resource patterns that underlie these generalities. These patterns will be discussed in the following Demand chapter.

Field-based activities are the most abundant within the Metropolitan Boston Region, which is reasonable to expect considering the region's large population (thus high recreation demand), the limited acreage available for the development of open space and recreation facilities, and the relatively small areas required for field facilities. Field-based activities rate as the second most abundant on Cape Cod, the Northeastern and Southeastern Regions.

Access for People with Disabilities

One overriding characteristic of recreation facilities and activities important to a significant portion of the public is access for people with disabilities. The Chadwick, Martin and Bailey Inc. demand survey identified that over 20% of Massachusetts' households contain someone with a disability. Sensitivity to those with special needs has risen over the years, culminating in 1990 with passage of the Americans with Disabilities Act (ADA). The ADA requires that open space and recreation facilities, among many others, are accessible to people with disabilities. The 1988 inventory revealed that the most accessible facilities at open space and recreation sites were comfort stations and visitor centers. The resources themselves were generally less accessible. Statewide inventory findings revealed accessibility levels as high as 24% at facilities for field activities, while many of the water-based facilities and trails reported much lower levels of access.

State and municipal park and open space agencies are implementing plans to address access issues for people with disabilities. Information on the accessibility of recreation sites is generally available from the state agency, municipality or nonprofit organization that manages the site.

Finally, it should be noted that total abundance is only one measure of availability. The qualitative aspects of the recreation experience are also of great importance. For that reason, levels of use and satisfaction are explored in the following chapter on demand.